


# BROADBAND EXPANSION GRANT APPLICATION

## For Fiscal Year 2022

 Public Service Commission of Wisconsin  
 RECEIVED: 03/17/2022 12:12:25 PM

Primary Applicant (Name and Address):  <b>CTC Telcom, Inc. DBA Mosaic Technologies</b> <b>Almena FTTP Broadband Expansion</b>  <b>CTC Telcom, Inc DBA Mosaic Technologies</b> <b>401 South First Street</b> <b>Cameron, WI 54822</b>  <b>In partnership with Barron County, Barron County</b> <b>Economic Development Corporation, and Town of</b> <b>Almena</b>	Applications MUST be UPLOADED to ERF via the Commission's website, <a href="http://psc.wi.gov/apps35/ERF_upload/content/mymenu.aspx">http://psc.wi.gov/apps35/ERF_upload/content/mymenu.aspx</a> . Refer to section 2.3 for detailed instructions.  Applications are due and MUST be uploaded to ERF no later than: <b>March 17, 2022</b> at 4:00pm (16:00) Central Time. <b>Late applications will not be accepted.</b>
	Contact for further information: <a href="mailto:PSCStatebroadbandoffice@wisconsin.gov">PSCStatebroadbandoffice@wisconsin.gov</a>
	Date: December 1, 2021
The Public Service Commission of Wisconsin is seeking applications for Broadband Expansion Grants. The Commission may award one or more grants during Fiscal Year 2022 to public and private entities that meet the eligibility requirements set forth in Wis. Stat. § 196.504. This grant round will be funded with bond proceeds authorized by the Wisconsin Building Commission pursuant to Wis. Stat. § 13.48(30). As such, successful applicants are subject to the requirements of Wis. Stat. § 13.48(30). Successful applicants will demonstrate a clear and achievable plan to improve broadband communications services in one or more underserved areas in the State.	
<b>Applicant Certification:</b> In signing this application, the undersigned verifies under penalty of perjury that the Applicant and its employees and agents have not, either directly or indirectly, entered into any agreement or participated in any collusion or otherwise taken any action in restraint of free competition with respect to this application; that no attempt has been made to induce any other person or firm to submit or not to submit an application; that this application has been independently arrived at without collusion with any other proposer, competitor or potential competitor; that this application has not been knowingly disclosed prior to the opening of applications to any other applicant or competitor; that all of the responses and representations of Applicant in this application are true and correct to the best of the undersigned's knowledge, information, and belief; and that Applicant agrees to, accepts, and will comply with all of the terms and conditions respecting this application and any award of a broadband expansion grant as may be established in a grant award Agreement.	
Name of Authorized Representative (Type or Print)  <b>Domenico Fornaro</b>	Title  <b>CEO</b>
Signature of Authorized Representative  	Date  <b>March 16, 2022</b>
Phone ( ) <b>715-458-5400</b>	

## SUMMARY OF GRANT APPLICATION

Primary Applicant Name <b>CTC Telcom, Inc. DBA Mosaic Technologies</b>	Amount of Broadband Grant Request (round to nearest dollar) <b>\$2,118,131 (89.6%)</b>
Federal Employer Identification No. <b>39-1868406</b>	Amount of Matching Funds Pledged (round to nearest dollar) <b>\$245,871 (10.4%)</b>
Contact Name and Title <b>Domenico Fornaro, CEO</b>	Total Cost of Proposed Project (round to nearest dollar) <b>\$2,363,902</b>
Telephone Number <b>715-458-5400</b>	Project Name <b>Town of Almena FTTP Broadband Expansion</b>
E-mail Address(es) <a href="mailto:dfornaro@experiencemosaic.com">dfornaro@experiencemosaic.com</a>	Type of Proposed Broadband Service (FTTH, Cable, DSL, etc.) <b>Fiber-to-the-Premises (FTTP)</b>
Grant Manager, if different than Primary Applicant	Grant Manager Federal Employer Identification No.
Grant Manager Contact Name	Grant Manager Email Address and Telephone Number
If the application proposes a public-private partnership, list the names, addresses, and FEINs of the partner companies or organizations <b>Town of Almena, in Barron County, 211 Soo Avenue West, Almena WI 54805, FEIN 39-6005774.</b> <b>Barron County, 335 East Monroe Avenue, Barron, WI 54812, FEIN 39-6005668</b> <b>Barron County Economic Development Corporation, 335 East Monroe Avenue, Barron, WI 54812, FEIN 39-1779884</b>	
Brief Project Description <b>This project provides Fiber to the Premise broadband to unserved and underserved areas in the Town of Almena. The specific area targeted has 322 homes and businesses.</b>	
Maximum Proposed Download Transmission Speed <b>10,000 Mbps</b>	Maximum Proposed Upload Transmission Speed <b>10,000 Mbps</b>
Minimum Proposed Download Speed Available To Purchase <b>25 Mbps</b>	Minimum Proposed Upload Transmission Speed Available To Purchase <b>10 Mbps</b>
County or Counties served by this project <b>Barron</b>	Community or Communities served by this project <b>Town of Almena</b>
List of the broadband service providers, if any, currently serving the area the applicant proposes to serve <b>CenturyLink</b>	

Does proposed project serve an <i>unserved</i> area of the State, as defined in <u>Section 1.4</u> of the application instruction? (yes/no)  <b>Yes</b>	Is the Applicant certified as a Broadband Forward! Community or Telecommuter Forward! Community, or does the grant project propose to serve a Broadband Forward! Community or Telecommuter Forward! Community? (yes/no)  <b>Yes</b>
For last mile projects or component the expected number of Business Locations that will have access to the improved broadband service (i.e., total business locations passed or with new service access).  <b>3</b>	For last mile projects or components the expected number of Residential Locations that will have access to the improved broadband service (i.e., total residential locations passed or with new service access).  <b>319</b>
Of the improved business locations, how many locations are <i>unserved</i> ?  <b>0</b>	Of the improved residential locations, how many are <i>unserved</i> ?  <b>40</b>
For providers that are eligible telecommunications carriers will the proposed broadband service be available to Lifeline customers? (yes/no)  <b>Yes</b>	Are there any programs available for low-income households to access low-cost service or discounts? (yes/no)  <b>Yes: Lifeline and ACP for Broadband</b>
Is the internet service provider currently participating in the Emergency Broadband Benefit Program? (yes/no)  <b>Yes, EBB and ACP.</b>	Is the internet service provider currently participating in the Department of Public Instruction and CESA purchasing's Digital Learning Bridge? (yes/no) <b>Yes</b>
Did the internet service provider participate in the Public Service Commission's voluntary Broadband Coverage Data Collection in 2021? (yes/no) <b>Yes</b>	

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## Summary of Project Budget and Funding Statement – Cost Categories and Revenue Sources

## FY22 Broadband Expansion Grant Application

### Budget & Income Summary



Please complete this form using Microsoft Excel. A PDF copy must be attached to your application as page four. In addition, this form must also be uploaded to ERF in Excel format.

### Grant Summary

Grant Applicant:	Project:
CTC Telcom, Inc. dba Mosaic Technologies	Town of Almena

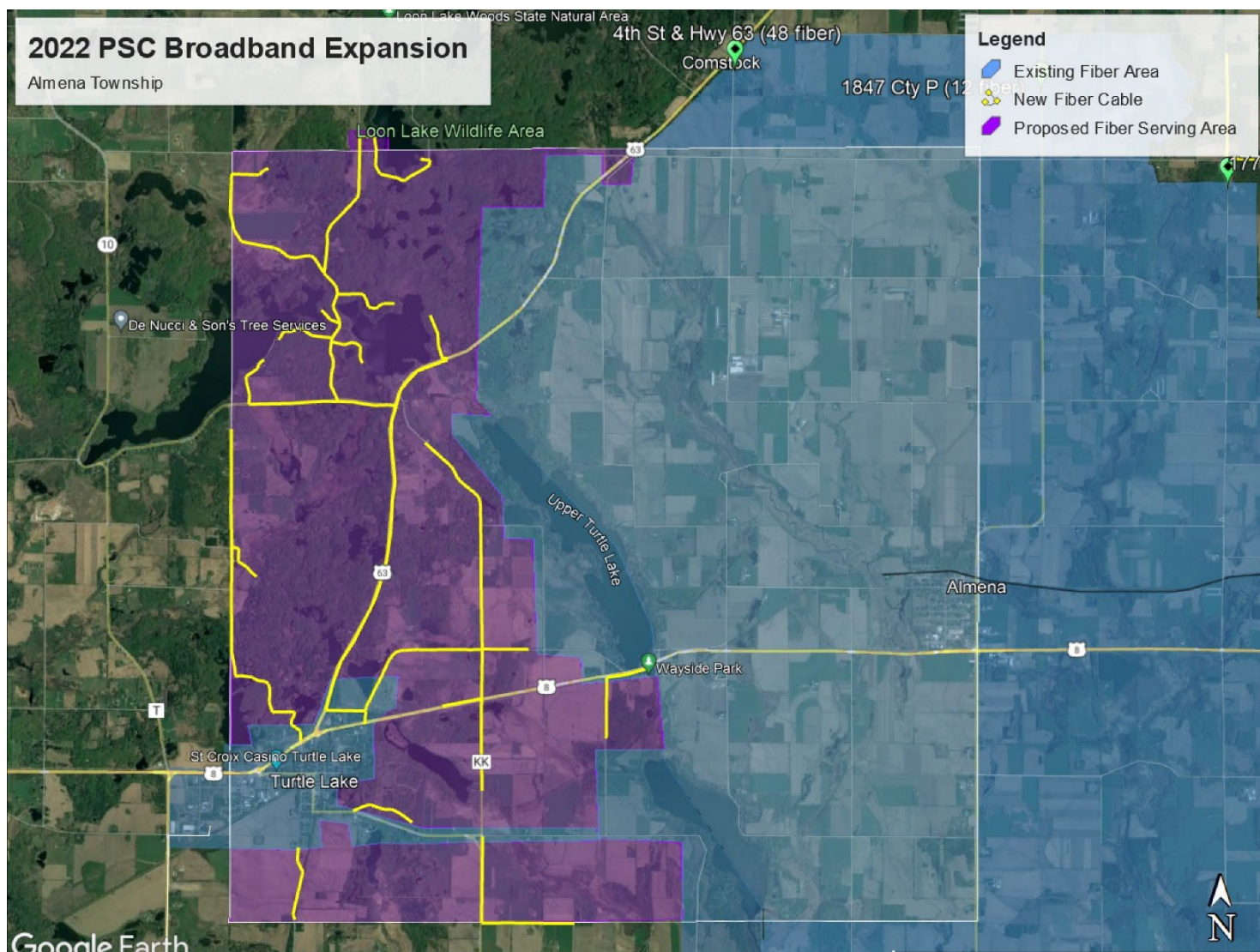
### Budget

Line:	Description / Category:	Grant Funds:	Match:	Total:
1	Contractual, Consultant Fees	\$ 1,657,629.00	\$ 245,871.00	\$ 1,903,500.00
2	Equipment	\$ 164,750.00	\$ -	\$ 164,750.00
3	Supplies			\$ -
4	Labor (Salary, Fringe)	\$ 295,652.00	\$ -	\$ 295,652.00
5	Permitting, Licensing Fees			\$ -
6	Travel			\$ -
7	Other			\$ -
Total:		\$ 2,118,031.00	\$ 245,871.00	\$ 2,363,902.00
		10.4% match requested		

### Pledged Contributions

#:	Entity:	Entity Type:	Pledge Type:	Pledge:
1	Mosaic Technologies	Applicant	Cash	\$ 200,000.00
2	Town of Almena	Partner	Cash	\$ 44,871.00
3	Barron County Economic Development Corporation	Partner	Cash	\$ 1,000.00
4				
5				
6				
7				
8				
9				
10				
Total:				\$ 245,871.00

### Maps of Proposed Broadband Expansion in this Application



Yellow backbone, distribution, and local fiber is initially an extension of Mosaic's existing fiber along Highway 8.

Costs for locations served in this application are exclusively within the lavender-shaded project area.

## **Executive Summary**

### **CTC Telcom Town of Almena FTTP Broadband Application**

CTC Telcom, Inc. (dba Mosaic Technologies), with the support of the Town of Almena, Barron County, and the Barron County Economic Development Corporation request a Fiscal Year 2022 Broadband Expansion Grant award of \$2,118,131 to construct 27.75 miles of fiber past 322 unserved and underserved locations in 14.4 square miles of rural residences and farms located between the Villages of Almena and Turtle Lake, along the western edge of Barron County. This project will deliver fiber-based, high-speed broadband where there are no options for adequate service. Mosaic and its partners will contribute \$245,871 to this rural hard to reach project.

The majority of employment in the area around Turtle Lake/Almena is in blue-collar jobs. The primary industry of the people living in the Turtle Lake - Almena area work in personal care services (8%), healthcare support services (8%), and the food service industry (7%).

Broadband brings many possibilities in a post-pandemic world. The population is sparse but are continuing to work and contribute to their communities and local areas. Just 10% of people over 25 hold a college degree, which is very low compared to the rest of the nation, whereas the average among all cities is 20%. Per capita income in 2018 was \$18,624, which is low income relative to Wisconsin and the nation.

Almena is the trailhead to Cattail State ATV Trail, an all-season Outdoor Recreation Destination in northwestern Wisconsin. The Cattail State Trail is 18 miles of trail on a former rail corridor between Almena, WI and Amery, WI and passing through the Village of Turtle Lake. The trail is open year around to ATVs, walking, bicycling, leashed pets, horseback riding, snowmobiles, cross country skiing and snowshoeing.

Residents in jobs supporting tourism and in the many farms in the Almena area describe their connections unreliable, unstable, detrimental, and frustrating. A government official living in the area comments, “speed and capabilities are terrible”, “my 3 Mbps Century line is almost worthless.” Residents and businesses struggle with their connections and being able to do even simple web browsing from their homes.

Fiber broadband can play a pivotal role in shaping the future economic expansion to the area. Due to the success of the previous fiber-to-the-premise (FTTP) projects within the Almena Township area, including a previously PSC funded FTTP project around Upper and Lower Turtle Lakes, Almena Township approached Mosaic during this application round for completing Mosaic’s service offerings throughout the Township in a public-private partnership.

Mosaic’s solution is to construct a future proof FTTP architecture. To minimize long-term cost and damage to fiber, Mosaic proposes to install, splice, and certify service drops concurrently with main line construction. When completed, all residential and business customers will have access to broadband speeds up to 10 Gbps as well as voice and video entertainment services.

Neither the economic nor the social impact of this project can be overstated. Funding of this project is advantageous for the following economic and social reasons:

- \* Premises in this area are underserved for current and future communications needs.
- \* Expansion of distance learning for both traditional and non-traditional students.
- \* Telecommuting becomes an option for residents of the project area.
- \* Business can attract patrons through technology and compete on an e-Commerce platform.
- \* Lodges and resorts can attract and retain guests needing broadband connectivity.
- \* Elimination of barriers to efficient business operations.
- \* Rural/urban healthcare access divide reduced with telehealth capabilities.
- \* Real estate values objectively increase with fiber connectivity.

This project would be a major boost to the residents and small businesses who are stranded with very little internet access. Mosaic proposes a comprehensive solution, including fiber drops to every home and business. Mosaic has a reputation for providing excellent products and services at reasonable cost while also supporting the communities they serve. This project is a continuation of its legacy.

3.2 Mandatory application requirements

3.2.1 Applicant identification and contact information

- a. The name and address of the entity applying for the grant, and the mailing address, telephone number and e-mail address of one or more contact persons representing the applicant.

Name of Entity: CTC Telcom, Inc., dba Mosaic Technologies  
Mailing Address: 401 South 1<sup>st</sup> Street, Cameron, WI 54822  
Telephone Number: 715-458-5400  
Contact: Domenico Fornaro, CEO  
Email address: dfornaro@experiencemosaic.com

- b. If the application proposes a public-private partnership, the identity and contact information for all application partners.

This application is supported by a robust partnership between Mosaic Technologies, Town of Almena, Barron County, and the Barron County Economic Development Corporation. All parties recognize the significant impact this project will have on the wider region. By providing fiber connectivity, the residents and businesses will gain broadband access at a level conducive to more than very basic connectivity. In these challenging times, this will provide a lifeline to this struggling area.

The following entities are collaborating to see this project completed:

Public-Private Partnership Agreement

Name of Entity: Town of Almena  
Mailing Address: 211 Soo Avenue West, Almena, WI 54805  
Telephone Number: 715-357-6016  
Contact: Ken Scheps, Chair

Name of Entity: Barron County  
Mailing Address: 335 East Monroe Avenue, Barron, WI 54812  
Telephone Number: 715-537-6841  
Contact: Jeff French, Barron County Administrator

Name of Entity: Barron County Economic Development Corporation  
Mailing Address: 335 East Monroe Avenue, Barron, WI 54812  
Telephone Number: 715-637-6871  
Contact: Dave Armstrong, Executive Director

Broadband Forward!

Name of Entity: Town of Almena  
Mailing Address: 211 Soo Avenue West, Almena, WI 54805  
Telephone Number: 715-357-6016  
Contact: Ken Scheps, Chair

- c. The application must show that the applicant is an organization, a telecommunications utility, or a city, village, town, or county that has established a legal partnership or joint venture arrangement with an otherwise qualified organization or telecommunications utility, and as such meets the eligibility requirements set forth in Wis. Stat. § 196.504(1).

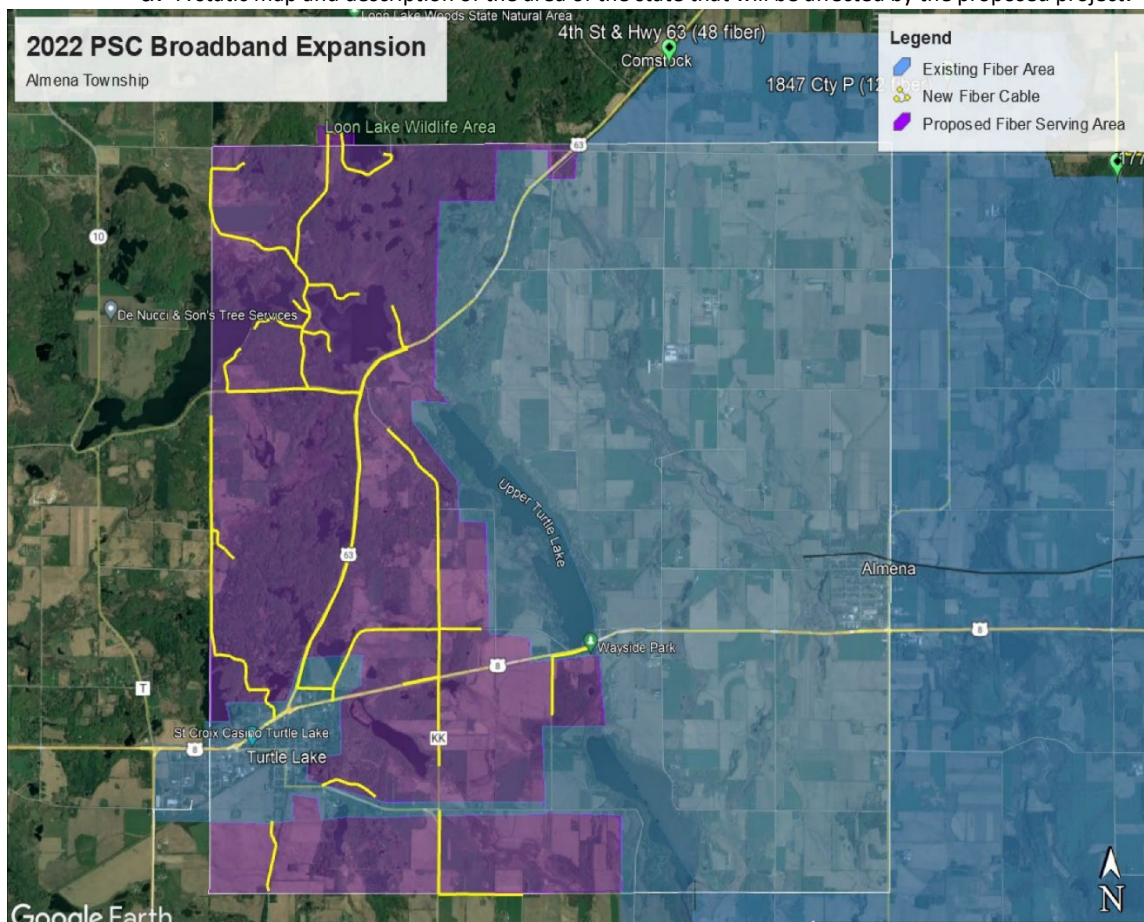
CTC Telcom, Inc. dba Mosaic Technologies is an alternative telecommunications utility certified by the Public Service Commission of Wisconsin (PSCW) to provide service as an Alternative Telecommunications Utility (ATU) in Docket 1455-NC-100.

CTC Telcom, Inc. dba Mosaic Technologies (PSCW Utility #1455) provides service to the Rice Lake, Barron, Chetek, Turtle Lake, Cumberland, and Birchwood exchanges.



### 3.2.2 Description of the project

#### a. A static map and description of the area of the state that will be affected by the proposed project.



Mosaic proposes a comprehensive Fiber-to-the Premises design to provide high speed broadband access to the residents of the Town of Almena. This project represents a one-year endeavor to bring fiber-based access to these unserved and underserved regions in Barron County. Mosaic has backbone fiber located near the project area. Utilizing the scalability of Mosaic’s existing infrastructure will bring high speed broadband to over 322 unserved and underserved homes and businesses in a cost-effective manner.

#### b. If the project area lies within a census block designated as served on the PSC Broadband Map, provide additional documentation to demonstrate the actual broadband service that is available in the proposed project area.

This project includes census blocks the PSC Broadband Map, as viewed on March 15, 2022, shown as served. Discrepancies exist in what is reported versus what is reality. The map shows CenturyLink incumbent landline and Northwest Communications wireline services as well as T-Mobile terrestrial wireless internet as the carriers causing the “served” designation.

T-Mobile claims availability of 25/3 Mbps broadband, however, there appears to be little to no mobile coverage in the area. Similarly, CenturyLink’s own Form 477 data would suggest a combination of 15/.75 and 10/1 Mbps internet available. No residents we spoke to in the Almena area could verify either carrier offered these speeds. In the case of T-Mobile, local vegetation and distance from towers were the most likely issues. For CenturyLink no subscriber in the project area suggested an available speed anywhere near what was advertised. In fact, it was the near uniform lack of reliable and available broadband that led Mosaic to this project.

Northwest Communications claims service in some of this area at 1 Gbps. No existing service and bandwidth levels were able to be confirmed to the residents within the project area. LTD Broadband, Inc. received an RDOF award in several



census blocks in the southern quarter of the project area. However, it is doubtful they will demonstrate the technical, financial, or operational wherewithal to complete any builds in this area by the end of 2024. LTD, for its part, has defaulted in several of its award states, and even if it achieves final FCC clearance, is likely to miss buildout milestones in this hilly part of Barron County.

### C. An explanation of how the proposed project will increase broadband access.

The proposed project increases broadband access as follows:

1. As illustrated on the Wisconsin Broadband map, viewed on March 15, 2022, current providers claim various broadband speeds in the project area. However, there is also a variety of discrepancies as to what the reality of the service level actually are. Some of the homes are considered unserved, but in reality, all 322 homes and businesses, while categorized as underserved, are unserved for any practical purposes to which they use broadband.
2. Mosaic will provide Fiber-to-the-Premise (FTTP) high speed broadband and internet access to over 322 homes and businesses whose broadband speeds are currently minimal, at best, integrating these areas within its existing FTTP network. FTTP connections offer more reliable access to internet at speeds that are not possible on existing facilities. This will include the construction of drops to each premise as requested. **This project is scaled for additional expansion in the near future.**
3. Symmetrical broadband at 1 Gbps and higher essentially future-proofs deployments for residential and business needs well into the future as new applications emphasize larger data uploads. Mosaic's existing network infrastructure will easily handle these future demands.
4. In exclusive partnership with the Town of Almena and support from Barron County and the Barron County Economic Development Corporation, Mosaic commits to extending FTTP past 322 residential and business premises in the proposed project area.
5. As evident since COVID started in March of 2020, telecommuting has become and remained a non-optional demand in the Town of Almena and surrounding area. Whether for work or online education, residents need to have the capability to reliably connect. Fiber internet is the solution to the current telecommuting debacles.
6. Provide access to telehealth, video, and imaging applications for diagnostic and health maintenance visits. This option enables early diagnosis and prevents unneeded travel at inopportune or dangerous times. With the pandemic, healthcare organizations are relying on telemedicine more than ever to reduce unnecessary contacts for vulnerable people. The nearest hospital is 10 miles away in Cumberland. The Marshfield Clinic Health System, a financial supporter of another Mosaic grant application, has completed over 240,000 telehealth encounters since March 2020. According to their CEO, "The COVID-19 pandemic accelerated the move to delivering care via telehealth." She also states, "Telehealth is not going away."
7. In its commitment to provide fiber broadband services to all customers, Mosaic Technologies has constructed over 1,200 miles of fiber spread among seventeen different projects since the beginning of 2017. This will continue in 2022 as the company directs construction funding toward unserved and underserved customers outside of its cooperative footprint. Mosaic's scalable FTTP network will not only meet the minimum 25/3 Mbps but will have the immediate capability of providing up to 10,000/10,000 Mbps, and faster over time with minor equipment changeouts.

Mosaic plans to offer broadband services at these prices to residential subscribers in the area. Mosaic's conscious decision to provide symmetrical offerings—that is, the same upward speeds as download—is an important forward-looking move to facilitate new and anticipate needs for work from home, remote learning, and telemedicine applications:

25 Mbps Downward/10 Mbps Upward	\$59.95 per month
250 Mbps Downward / 250 Mbps Upward	\$79.95 per month
500 Mbps Downward / 500 Mbps Upward	\$94.95 per month

## FY2022 Town of Almena FTTP Broadband Expansion – CTC Telcom dba Mosaic Technologies

1,000 Mbps Downward / 1,000 Mbps Upward  
10,000 Mbps Downward / 10,000 Mbps Upward

\$109.95 per month  
ICB Pricing is available

- d. A statement whether the proposed project is targeting the “last mile,” “middle mile,” or backbone portion of the broadband infrastructure.

This is a last mile project.

- e. A description of the broadband service to be provided, including estimated download and upload speeds, whether the speed is based on dedicated or shared bandwidth, and the technology that will be used. This description may be illustrated by a map or schematic diagram, as appropriate.

Mosaic Technologies will provide its broadband service exclusively using a fiber-to-the-premises (FTTP) network. This fiber network is an engineered extension of Mosaic’s existing robust FTTP fiber network and Calix electronics that integrates into Mosaic’s network. The same technologies will be used to provide the highest quality of service to all new customers served by this application.

The locations to be served will interface with Mosaic’s fiber backbone. Multiple Ciena 100 Gbps capable backhaul terminals will provide a diversely routed Internet and cable TV service. Fiber optic sizes will range from two fiber strands delivered to each house (aka fiber placed to the buildings or “drops”) to two hundred eighty-eight (288) fiber cable on the main line route.

In many projects in these rural areas, customers are connected to main line cable only when customers have a desperate need. This project includes the drop installation to all businesses and residential locations as requested during the entire time frame of the project to maximize both cost efficiencies and fiber coverage. This approach is supported by Mosaic matching 10.4% of the project cost.

All broadband electronics used to provide broadband services will be managed to the same standards as in Mosaic’s existing fiber enabled service territory.

- f. For middle mile projects:

This is not a middle mile project.

- g. A schedule by which the applicant intends to complete the components of the proposed project. The project period is up to 24 months.

If the grant application for this project is approved in the early Summer of 2022, Mosaic will use the following deployment schedule, based on similar projects it has completed:

Fall-Winter 2022	Order and stage equipment and supplies
April-November 2023	Bury fiber distribution and feeder fiber
November 2023-February 2024	Install electronics at subscriber locations
January-Summer 2024	Turn up fiber-based customer services

While this is an aggressive timeline, Mosaic is confident the project can be completed. With excellent relationships with local construction companies as well as proactive supply chain management, this timeline will be met. The company recognizes how important an expedited project is to the residents of the proposed project area.

### 3.2.3 Itemized Budget (all amounts should be rounded to the nearest dollar)

- a. In addition to the Summary of Project Budget that is included as page 3, applicants should include a price list or quote for any equipment the applicant intends to purchase, including capital expenditures. The application should also indicate whether any facilities involved would be owned, rented, or leased.

Exhibit C – Construction Costs summarizes construction costs for the project. Engineering, some construction and some installation will be performed by Mosaic’s long-term third-party contractors under contract and under Mosaic’s supervisory control.

All network assets will be owned and managed by Mosaic Technologies.

- b. The application must show that the grant, if awarded, will not subsidize the expenses of a telecommunications provider or the monthly bills of telecommunications customers. For purposes of this grant program, subsidize means a contribution to the operating costs, including profit, of the telecommunications provider.

The grant funds requested in this Application will only be used for authorized purposes.

The applicant will not subsidize its ongoing expenses or the monthly bills of telecommunications customers. It is understood that for purposes of this grant program, subsidy means a contribution to the recurring service charges, operating costs, including profit, of the telecommunications provider.

- C. The application must show that the grant funds requested will be used for the sole purpose of constructing broadband infrastructure in the underserved areas covered by the application. Construction of broadband infrastructure may include any of the following:

Mosaic Technologies will use all grant funds requested for the sole purpose of constructing broadband infrastructure in the unserved and underserved areas covered by our application. Construction of broadband infrastructure affirmatively will be limited to the following:

- a. Project planning that takes place during the performance period.
- b. Obtaining construction permits and Rights of Way.
- c. Construction of facilities, including construction of last mile infrastructure.
- d. Installation and testing of the broadband service.

Mosaic Technologies positively states that all grant funds requested in this Application will be used for the sole purpose of constructing broadband infrastructure in the underserved areas described in this Application.

#### 3.2.4 Priority factors supporting the application

- a. **Matching funds.** A description of the matching funds the applicant will invest in the proposed project, if any. For each element, indicate the type of match (cash, salary expense, or in-kind contribution). If the application is submitted by a partnership, identify the partner responsible for providing each element of the proposed matching funds. *Note: The requirement for this information is satisfied via inclusion of the completed Funding Statement as page 4 of the application.*

Recognizing the impact this project will have on the proposed project area, Mosaic pledges a 10.4% match to this project including \$44,871 contributed by the Town of Almena and \$ 1,000 contributed by Barron County Economic Development Corporation.

Matching funds are accounted for on Page 4.

- b. **Public-private partnerships.** If the public-private partnership is memorialized in a joint venture agreement or other writing, provide a copy of that agreement. If the partnership has not been reduced to a written agreement, provide a short description of the management role, financial commitment, or other contribution to the project for each participating partner.
  - In scoring this element, information regarding active engagement of diverse communities in the planning, permitting, or marketing of the project will be given weight as well.

Mosaic Technologies has entered into a Public-Private Partnership with the Town of Almena, Barron County, and the Barron County Economic Development Corporation to complete this project. Please see Exhibit A for the partnership documents. The Town of Almena is Broadband Forward! Certified and thus has demonstrated its interest in partnering exclusively with Mosaic to service their residents and businesses with this project.

- C. **Existing broadband service.** A list of the broadband service providers, if any, currently serving the area the applicant proposes to serve. In scoring this element, the following factors will be taken into account:

- The degree to which the proposed project avoids duplicating existing broadband infrastructure.

CenturyLink's 477 data reports ADSL copper wireline services between 7-15Mbps download and 0.5-1Mbps upload, but residents state their experience is consistently less. Northwest Communications reports 1Gbps service in the area with again no one confirming that high of bandwidth levels available.

- The application of a wireless broadband service provider proposing significant overlap with existing broadband service in addition to service to an unserved area will not be given priority consideration.

Coverage data reports T-Mobile's 25/3 Mbps wireless service but no known wireless infrastructure updates are scheduled to become operational in the next year.

- Provide a list of all landline broadband service providers (DSL, cable, or fiber to the home) and fixed wireless broadband service providers that overlap the footprint of the proposed broadband project.

CenturyLink using ADSL copper wire service about 15Mbps download and 1Mbps upload. Well below defined broadband service and usability for any residents or businesses. Northwest Communications using coax services claiming 1Gbps service, but actual testing is between 15-20Mbps download. T-Mobile is claiming 25Mbps download and 3Mbps upload in the area, but it is unknown if and where this coverage is coming from.

- If known, provide an estimate of the customers within the proposed footprint that are served by competing landline and fixed wireless broadband service providers, and the download/upload speeds offered by those competing service providers.

Mosaic is not aware of the quantity of customers served by competing landline or fixed wireless broadband service providers, in the proposed project area.

- Provide a list of mobile wireless broadband service providers that overlap the footprint of the proposed project.

The Wisconsin Broadband Map lists AT&T Mobility, Sprint/T-Mobile and Verizon Wireless claim coverage in the application area, but reliable and reasonably priced internet connectivity is debatable. Other providers may advertise coverage, but there are no known subscribers to other providers' cellular services in the area.

- If known, provide an estimate of the customers within the proposed footprint that are served by competing mobile wireless broadband service providers, and the download/upload speeds offered by those competing service providers. (The presence of existing mobile wireless providers does not contribute to or affect the evaluation of existing broadband service in the project area for purposes of priority consideration but provides a more complete picture of the broadband options available to residents.)

Mosaic is not aware of any significant customer counts served by competing terrestrial or mobile wireless providers in the proposed project area.

- d. **Project impact.** A description of the geographic area and the population, both in terms of absolute numbers and likely users, which will be served by the proposed project. Indicate the number of anticipated residential and business customers in the project area, if known. Explain the speed and quality of internet service that will be available. Include information about the range of packages available for purchase. Provide details on any low-income access programs and steps the project will take to support adoption.

The geographic area served by this project covers 14.4 square miles connecting the Almena and Turtle Lake town centers, reaching 322 residential and business premises so far neglected for broadband. It will bridge the digital divide and offer opportunities to thrive, not just survive.

Businesses, in general, have struggled to stay open during COVID due to stay at home orders and shutdowns. However, even in "normal" times, area businesses struggle to meet the needs of potential customers due to unreliable broadband. Limited bandwidth has resulted in the loss of personal and professional opportunities including access to remote learning, access to telemedicine, receiving updates to agricultural databases or job application sites. This results in significant lost revenue to both businesses and a potential loss of jobs.

Mosaic projects subscriber participation at close to 65% for customers within the first six months. Based on historical trends and demographics of the area, residential take rate is projected at around 75% or 239 homes within the first twelve months.

Led by Mosaic's Fiber to the Premise (FTTP) deployment, the area will benefit through:

- Initial broadband speeds up to 10 Gbps symmetrical to all current and future residences and businesses to receive voice services, data connectivity and video. With drops to every home, these speeds will cover the entire project area. The most economical package for residential service will be \$59.95. Section 3.2.2.c. displays all offered packages.
- Government agencies and emergency services rely on broadband as part of providing its services. Buried fiber facilities offer the impeccable reliability especially during crisis situations and natural disasters when other facilities may be destroyed. Residents will have access to 24-hour telehealth services.
- Residents in the project area have a minimum 10-mile drive to the nearest hospital in Cumberland. With fiber connectivity, remote diagnostic medicine and health maintenance services, from pediatric to geriatric purposes, will be possible with simple laptop cameras and attached monitoring devices that are becoming commonly available. This brings the advanced care to the residents and eliminates unnecessary travel. The ongoing pandemic exposes the limited broadband as healthcare providers are encouraging patients not needing in-person care to remain at home to stem the transmission of COVID.
- Telecommuting: Like telehealth, telecommuting is becoming a norm. In several cases, there are seasonal residents who would either spend more time or move full time to the area. However, lack of reliable broadband makes telecommuting impossible. As referenced in the accompanying support letter, State Representative and Barron County Economic Director Dave Armstrong recognizes that "once barriers to broadband expansion are removed, Barron County will improve its position as a destination for startups, expanding and relocating businesses, and telecommuters and working families relocating here." These opportunities are completely dependent on upgrading inadequate broadband infrastructure through construction of fiber optic facilities.

e. **Scalability.** A description of how the proposed project could expand or improve the broadband service it delivers, while maintaining the quality of its broadband service. This description should include specific projected increases in the following parameters that are known at the time of the application:

- The number of users.
- The number of network nodes.
- The number of services provided.
- The geographic area served by the project.
- This description may also include a discussion of possible growth potential that is outside the commitment the applicant is making as part of its application.

This project is an extension of Mosaic's current fiber network as the project area in the near vicinity of Mosaic's current fiber facilities. Mosaic will be extending fiber from multiple current locations to reach different sections the proposed project area.

In 2021, Mosaic Technologies upgraded its transport network to accommodate future geographic expansion as well as the influx of new subscribers. With the fiber infrastructure in place, any future broadband demands on the network will be managed without the need to place additional fiber.

Based on recently completed fiber projects, Mosaic projects over a two hundred residential and home-business customers within six months of project completion. Beyond symmetrical internet speeds, all customers will have access to a full range of voice services offered over a VoIP protocol along with video entertainment options delivered on both an IP platform as well as an over-the-top (OTT) option.



At the completion of this project, Mosaic will have run 27.75 miles of main line fiber in the project area. As Mosaic continues to explore opportunities to fill in its network in unserved and underserved areas, this would be a potential growth area to continue both the north, west and south.

- f. **Economic development.** A description of how the proposed project will promote job growth or retention, expand the property tax base, or improve the overall economic vitality of the municipality or region. This description may be supplemented with a letter from one or more persons discussing the potential economic impact the project could have for that individual or business. In scoring this element, the following factors will be taken into account:
- A discussion of potential economic impact the project could have for an individual business located in the project area.

Agriculture, recreation, and small business are the primary employment areas in the Town of Almena. Mosaic's addition of fiber-based broadband services will allow residents to engage in precision farming, e-commerce, work-at-home, and educational opportunities that are not available today. Fiber-based broadband will be an economic boon for the Town and surrounding residents.

- An explanation of how an improved download and upload transmission speed could better support a specific business in the project area.

Reliable broadband to the area will increase tourism as well as farm and small business efficiencies and for the first time make them competitive in the expanding e-commerce world around them.

- An explanation of the likely impact improved broadband service could have on residential property values, supported by local sales data if available.

Studies by the Fiber Broadband Association have shown that home values increase by an average of 3% for homes with fiber-based broadband. With fiber availability, it is anticipated that the demand for the available building sites will increase causing growth in property values and the tax base. Property values vary tremendously in the project area. Reliable fiber optic broadband to a home, it can create an average increased value of \$5,000 or more. Cabins, rentals and soon-to-be year-round home prices can expect to see even greater increases, along with higher employment to purchase them.

- A demonstration of how improved broadband service to a residential portion of the project could benefit a telecommuting population.

Recent surveys suggest 25% of residents currently telecommute, have the option, or for personal reasons, need to. Extrapolating that to the 319 residential locations in this application equates to 75 potential telecommuters. Arguably, that number could be higher with improved broadband access. These people benefit immediately from improved broadband.

- A demonstration of how the speeds and service being offered by the project fits with current and future economic needs of the community and local businesses.

The positive benefits to the economy from this project translate directly to higher real estate values, more home construction and remodeling, and an expanding tax base which benefits all residents in the area. Gigabit capable internet connects rural areas to the world and presents endless opportunities for those searching for a more rural lifestyle. State Senator Janet Bewley strongly endorses this project and believes, along with Barron County, and the Barron County Economic Development Corporation, that the broadband capabilities afforded the proposed project area will greatly enhance both current and future opportunities for this region.

- g. **Effect upon broadband service to adjacent areas.** A description of whether the proposed project will or will not impair the ability of a broadband service provider or competing broadband service provider to extend broadband service to areas adjacent to the proposed project area.

Mosaic's proposed project will not impair the ability of any broadband service provider to extend service to areas adjacent to the proposed project area. On the contrary, the availability of FTTP will serve as a catalyst for demand in the other underserved areas where the incumbent, or others, could overbuild with fiber.

### 3.2.5 Other information supporting the application

- a. A description of applicant's history or experience constructing broadband communications facilities in the state and elsewhere.
  - If applicable, an applicant must comment upon the status of all prior broadband expansion grant projects, including the type of broadband technology used, the facility route actually built or installed, the number of residential and business customers actually connected, and other relevant details of the prior project(s).

Mosaic Technologies has defined itself as a leading technology provider and is seeking to further expand its best-in-class fiber services to underserved residential and business customers. Mosaic's fiber product line is a permanent solution to bridging the digital divide. The below projects demonstrate our commitment to unserved and underserved residents in our expanding service territory.

**2017:** Mosaic completed a project in partnership with Indianhead Holsteins immediately North and West of the City of Barron. This project brought FTTP to thirteen unserved farms including a large family business that included a farming division, a renewable wood products division, and a live entertainment division which coordinates events for military troops deployed around the world. This was partially funded by a broadband expansion grant.

**2019:** Mosaic completed a FTTP project to nineteen homes North and West of the City of Rice Lake. These residences, located in an underserved area of a large incumbent carrier, now have access to 1Gbps symmetrical service along with voice and video entertainment services. This project was also awarded a broadband expansion grant.

**2020:** Phase 2 of the 2017 project extended five miles of fiber to reach eighteen residences along Highway T outside of the City of Barron. Those receiving fiber broadband included several residents who work from home in "on-call" positions including one in health services and the other an IT director for a local school district. Mosaic also received several positive comments related to providing fiber at such a critical time as COVID. This project was partially funded by a broadband expansion grant.

**2020:** Mosaic bridged the digital divide for thirty-seven customers, including eight businesses. These customers are located on a four-mile stretch of County Highway SS North of Rice Lake. While close to city amenities, they had inadequate services from a large incumbent carrier. Now they have access to fiber-based services with up to 1Gbps speeds. Wisconsin PSC awarded a broadband grant for this project.

**2020:** Mosaic, with assistance from CARES Act funding through the Wisconsin PSC, constructed fiber past 188 homes along the Western shores of both Upper and Lower Turtle Lakes. This project was originally submitted for broadband grant consideration as part of the 2020 grant cycle and was part of a larger fiber project that included the Village of Turtle Lake. This project was not funded in that cycle.

**2021:** In March of 2021 Mosaic was awarded three PSC broadband expansion grants; Town of Cedar Lake, Sand Creek, and Prairie Farm. Mosaic constructed fiber to approximately 1,215 homes and businesses around Red Cedar Lake (Town of Cedar Lake) in northeast Barron County and the Village of Birchwood in southeast Washburn County. All fiber construction was completed by the first quarter of 2022 for the Red Cedar project and all customers now have access to fiber services. Final grant documents were submitted in the first quarter of 2022.

Additionally, Mosaic constructed fiber past 1,453 homes and businesses in the Towns of Sand Creek and Otter Creek and the Towns of Prairie Farm and New Haven in southern Barron County and northern Dunn County. This project was also completed in late 2021. Final inspections are taking place and closeout is expected to be completed by the second quarter of 2022.

These three projects provide robust and reliable best-in-class fiber services to these communities. The successful completion of these projects demonstrates Mosaic's capability in expanding their fiber network to the residents and businesses located in their surrounding communities.

- An applicant must also comment on broadband construction projects undertaken in prior years that were not funded in part by the Broadband Expansion Grant program.

Starting in 2017, Mosaic Technologies, embarked on a multiyear initiative to overbuild fiber in the areas of its six-exchange incumbent territory being served with copper. Since inception, the cooperative has plowed over 1,100 miles of fiber. As of today, the entire cooperative service areas is 100% FTTH. This project was funded, in part, through loans from the Rural Utilities Service (RUS), a division of the United States Department of Agriculture.

Over the past four years, Mosaic has self-funded multiple smaller projects outside its incumbent territory. In the cities of Barron, Chetek, and Rice Lake, Mosaic enhanced its rich copper network by vectoring its VDSL platform, bringing speeds up to 150/25 Mbps to residents in those areas. While this copper strategy serves as a technology improvement, the long-term solution is fiber. Starting in 2021, Mosaic has invested in fiber where current copper facilities exist in its competitive footprint to future proof its network.

Additional Mosaic Technologies self-funded fiber projects include:

- Turtle Lake – As mentioned previously Mosaic submitted a 2020 grant request for Turtle Lake. While this grant was not funded, Mosaic remained committed to bringing fiber to these underserved residents and businesses. During the spring and summer of 2020, fiber construction passed over 300 homes in the Village.
- Rice Lake – Starting in 2021, Mosaic began a multi-year initiative to replace copper facilities with fiber services to approximately 3,723 residents and businesses. To date we have completed FTTP to 473 locations.
- Chetek – Also starting in 2021, Mosaic began a 2-year initiative to replace copper facilities and construct new greenfield. To date we have successfully completed the replacement of all copper with fiber to 1,200 locations and have constructed greenfield fiber service to 350 new locations. This project is schedule to be completed in May of 2022.

All of these projects represent Mosaic's ongoing commitment to bring best-in-class fiber services to rural Northwest Wisconsin. Exhibit D provides a history of Chibardun Telephone Cooperative, Inc. / CTC Telcom, Inc. DBA Mosaic Technologies.

- b. A description of how the proposed project will or will not duplicate existing broadband infrastructure.

Mosaic is not duplicating any likely expansion by CenturyLink in the proposed project area. Cellular internet services are uneconomical and often unavailable in homes and no incumbent provider infrastructure improvements are currently promised nor anticipated.

- c. A description of an applicant's financial ability to undertake the proposed broadband construction project. This may include information such as the number of years the company has been in operation, documentation of successful completion of similar infrastructure projects, evidence that sufficient funds are available to cover project expenditure and match, customer turn-over rates, and credit rating.

Mosaic Technologies invests over \$3,000,000 each year in capital improvement projects through self-funding from operating income and EBITDA. The required time, resources, and provisional matching funds for this project have been factored into the Mosaic's 2022-2024 capital spending plan.

Mosaic provides a record of its historical and current projects in Exhibit D below, reviewing its long and successful ability to manage and operate large construction projects.

Each year, Mosaic Technologies files its PSCW Annual Questionnaire fully describing regulated and non-regulated revenues.

- d. For middle mile projects, state the terms under which the applicant will make its middle mile fiber resource available to last mile providers. Without disclosing project-specific or customer-specific negotiated rates for service or access, state whether access to the middle mile fiber resource will be offered to last mile providers at a rate that is reasonable and common to the industry. Describe any restrictions or limits that may limit the availability or interconnection with the middle mile route.

This is not a middle mile project.

- e. For middle mile routes, state the amount of fiber capacity, by number of fiber strands in a cable, that the applicant has been reserved for public use. Describe any commitment or tentative discussion indicating the local government or State agency that might use those fiber strands, and for what purpose. Describe any restrictions or limits that may limit the public use (e.g., a possible use conflicts with an existing program covering the same subject matter).

This is not a middle mile project.

- f. A description of how the proposed project will affect the ability of individuals to access health care service from home, including any impact upon the costs of those services.
- Specific information from a hospital or clinic in the project area that currently uses or intends to use home-based telemedicine equipment to enhance access health care service would best illustrate this point.

The rising cost of healthcare, downward pressure on reimbursement to providers, and a lack of physician availability in rural areas, has caused a significant shift in the delivery of healthcare to rural residents. No longer is there a hospital or clinic in every town. Health systems have had to make the difficult choice to close the local facility in favor of larger regional health facilities. This creates a significant divide in critical healthcare access for residents in rural areas. With the advent of telehealth, the physician can return to making “house calls” by providing remote diagnostic and health maintenance services to a wide spectrum of patients. COVID-19 has “accelerated the move to delivering care via telehealth” according to Susan Turney, CEO of Marshfield Clinic Health System (MCHS). MCHS has seen its telehealth encounters explode to over 240,000 since March of 2020, when measurement began in earnest.

Telehealth is possible with an affordable computer with camera, attached monitoring devices, AND high-speed broadband. Mosaic’s deployment of fiber infrastructure provides the virtual highway to connect patients with their doctors. The time and cost of traveling to a regional provider will no longer be a limiting factor for those seeking advanced care.

Even cellular 911 service will function dependably from the home as FTTP broadband allows reliable WIFI services to modern cell phones.

- g. A description of how the proposed project will affect the ability of students to access educational opportunities from home.
- Specific information on the likely number of students that will benefit from improved access to educational opportunities from home would be useful.
  - Specific information regarding educational programs that are currently available for students in the project area would be useful.

Whether it be the primary and secondary students in the local school district or adults pursuing degrees in higher education, having access to the digital world for class resources is mandatory. With fiber broadband, all those seeking education would have access to online vocational and college level courses from limitless colleges and universities including the extensive University of Wisconsin online system. In this economically challenged area where many students live in poverty, fiber broadband can eliminate barriers to the educational resources students need to succeed.

- h. A description of actions taken by a city, village, town, or county in support of the grant application that have not been discussed in the context of a public-private partnership above, including but not limited to:
- The contribution of funds, easements or permissions to use publicly-owned real estate, construction materials, or other items of value to the grant project.
  - The contribution of in-kind assistance to the grant project in the form of waived fees and expenses for obtaining use permits and permissions.

The Town of Almena has formalized Public Private Partnership with Mosaic Technologies and will support the project through waived fees and assistance with easements and utility right of ways.

- The contribution of other items of benefit to the grant project, such as public outreach and education, vehicles, water, etc.

The Town of Almena will assist in the promotion, outreach, and education for residents of the project area.

- Certification as a Broadband Forward! Community or Telecommuter Forward! Community.

The Town of Almena is a Broadband Forward! certified community.

- i. Letters and messages in support of the application submitted by prospective customers, local government officials, and other interested persons.

Barron County Government, Barron County Economic Development, Barron Area Schools, the School District of Turtle Lake, and White Construction are all staunch supporters of technology infrastructure improvements in their jurisdictions and their support documents have been included with this application in Exhibit E.

- j. Any other equitable factor that the applicant desires to discuss, including one or more of the factors in Wis. Stat. § 196.03(6) that the applicant believes its project would advance.

Mosaic Technologies has long been a respected community partner in its serving area. We embody the ideals of hard-working Northern Wisconsin residents. This includes positively impacting the quality of life for our community members and promoting initiatives that advance the area and its residents. Most notably is Mosaic's commitment to expanding fiber broadband throughout Northwestern Wisconsin. That ties directly to our business operations mission. Beyond that, Mosaic has been a community partner by offering its facilities, staff, and assets to support the public good. Examples include:

1. Free use of its meeting facilities by many area schools, local non-profit and government agencies providing 1 Gbps internet, video technology, and technical support. Specifically, Red Cross Blood Drives, Barron County Office on Aging seminars, student learning, and OSHA safety training workshops.
2. Disaster recovery headquarters. When a natural disaster hit residents in Mosaic's territory, we opened our building to the displaced residents, collected food, clothing, and household items for those residents and provided space for Barron County Emergency management to run its central operations for nine days.
3. Support of local events. When lack of support for Cameron's annual community festival threatened to cancel the events, Mosaic employees organized events, coordinated volunteers, and operated many activities to keep the festival alive and promote civic engagement.

Mosaic's mission is to provide advanced technology solutions for an affordable price. With Barron County being an economically challenged area in the state, we are sensitive to the balance of charging enough to keep the company profitable while also respecting the limited resources of our customers. We understand the importance of universal service for the rural communities we serve as we are a beneficiary of universal support recovery in our regulated territory. Section 3.2.5.a of this application enumerates several examples of how Mosaic invests heavily into the technology infrastructure to promote economic development and provide services to diverse populations in our geographic serving area. Beyond that, we provide the personal element not readily available in more urban settings.

In discussing this element, the following information may be useful:

- Technical support and training materials that the applicant intends to provide.
- Information that the applicant intends to use to promote better broadband adoption and use.
- A description of a program or outreach to provide assistance to individuals of low income.

Mosaic Technologies offers 24/7 customer support through our Network Operations Center and contracted after hours support center. We are generous with our time and attention to making sure our customers are prepared when using our services.

Working through schools and community organizations, Mosaic promotes the use of broadband by educating community members on the advantages as well as the pitfalls of technology. Mosaic was the first small telco to receive Level 2 certification from the cybersecurity experts at Dynetics, Inc. and internally we have adopted stringent protocols on data security and prevention of cyber hacking and offer that as a service to our customers.

During the COVID pandemic, Mosaic created free, public use WIFI hotspots at each of its office locations in Barron, Cameron, Chetek, and Rice Lake to provide access to local residents who lost access when other public sources such as schools and libraries closed. We also partnered with the local schools to provide free internet to low-income students with no broadband access. Mosaic acts as a partner to our community, not just the big internet pipe to the world.



## **Exhibits**

**Exhibit A – Public Private Partnerships and Telecommuter Forward Ordinances**

**Exhibit B – Maps of the Proposed Service Area**

**Exhibit C – Construction Costs**

**Exhibit D – History of Chibardun Telephone Cooperative/CTC Telcom dba Mosaic Technologies**

**Exhibit E – Letters in Support of this Application**

**Exhibit A**  
**Public-Private Partnerships**

**ALMENA TOWNSHIP BOARD OF SUPERVISORS RESOLUTION TO APPROVE  
BROADBAND EXPANSION PROPOSAL FROM MOSAIC TECHNOLOGIES**

**WHEREAS**, Town of Almena (the "Township") strives in expansion of fiber optic broadband infrastructure and service available to its residents;

**WHEREAS**, Mosaic Technologies ("Mosaic") is a provider of broadband services to the area in and around the Township;

**WHEREAS**, Mosaic presented a proposal for expansion of broadband services in Town of Almena area (the "Mosaic Proposal") at a Town of Almena meeting on Feb 7, 2022. The Mosaic Proposal shall be part of a Wisconsin Public Service Commission (PSC) Broadband Expansion Grant submitted on or before the grant cycle ending March 17, 2022.

**WHEREAS**, the Mosaic Proposal sets forth a Township contribution of \$ 44,871.37 in American Rescue Plan Act ("ARPA") funds, and such contribution assumes additional funds will be provided by, a Mosaic contribution, and grant award funds;

**WHEREAS**, pursuant to Wis. Stat. § 65.90(5)(a), the Town of Almena Board ("Board") approved the Township contribution of \$ 44,871.37 set forth in the Mosaic Proposal by a 2/3 member vote. Execution of the Mosaic Proposal will be dependent upon successful award of the respective PSC Broadband Expansion Grant submitted on or before March 17, 2022 and awarded in calendar year 2022.

**WHEREAS**, the Township Board reviewed and discussed the contents of this Resolution at its meeting on Feb 7, 2022, and the Board determined that it is in the best interest of the Township to commit Township funds in the amount of \$ 44,871.37 in ARPA funds and approve the Mosaic Proposal.

**NOW, THEREFORE, BE IT RESOLVED**, the Township Board determines the following:

1. **Recitals.** The Recitals set forth above are true and correct, and are hereby incorporated into this Resolution.
2. **Approval of Mosaic Proposal; Conditions.** The Township Board hereby approves the Mosaic Proposal and commits \$ 44,871.37 in ARPA funds to the broadband expansion project described in the Mosaic Proposal with the following conditions:

a. Each funding contribution set forth in Mosaic Proposal must be secured to the satisfaction of the Township, including the contribution of state grant(s), and the contribution of funds from Mosaic. Contributions from entities other than the Township may exceed the amounts set forth in the Mosaic Proposal.

b. All other necessary governmental approvals for the broadband expansion project set forth in the Mosaic Proposal are secured, including but not limited to the State of Wisconsin Public Service Commission.

In the event any conditions are not met to the Township's satisfaction, the Township

shall have no obligation to contribute or otherwise spend Township funds for the broadband expansion project described in the Mosaic Proposal.

3. **Health, Welfare and Safety.** The Town's approval of this Resolution and the Mosaic Proposal is beneficial to the health, welfare and safety of the Township's residents, taxpayers and visitors.

The content of this Resolution was reviewed and discussed by this Town of Almena meeting on Feb 7, 2022, and voted to recommend that the Town of Almena Board of Supervisors to approve.

(Sign)

Ken Scheps

(Print)

Almena Township Chairman

(Sign)

Kristen Maen Clerk

(Print)

Almena Township Representative

**BARRON COUNTY RESOLUTION NO. 2022 - 10**

**Resolution Supporting Mosaic Technologies, Inc., Cameron, WI, State of Wisconsin,  
Broadband Expansion Grant**

**TO THE BARRON COUNTY BOARD OF SUPERVISORS:**

**WHEREAS**, Mosaic Technologies, Inc. (Mosaic) located in Cameron, Wisconsin is interested in applying for and receiving a State of Wisconsin Broadband Expansion Grant, as announced by Governor Tony Evers on November 9<sup>th</sup>, 2021, to expand broadband infrastructure high-speed fiber lines primarily in the Township of Prairie Lake (North Chetek Fiber Expansion) and the Township of Almena (Township of Almena Fiber Expansion) in Barron County; and

**WHEREAS**, Mosaic has been in business for more than 100 years and currently provides a multi-faceted array of quality telecommunications products and services; and

**WHEREAS**, if Mosaic is successful in receiving these grant dollars, it is anticipated that the North Chetek Fiber Expansion will encompass an area of 6.2 miles of mainline, 198 locations passed and 1.6 square miles. The Almena Fiber Expansion will encompass an area of 27.75 miles of mainline, 319 locations passed and 14.4 square miles; and

**WHEREAS**, these grant dollars will be used by Mosaic in continuity with other possible grant dollars such as American Rescue Plan Act Funding, Wisconsin Public Service Commission Grant Funding and Asset/Infrastructure improvement funds directly from Mosaic Technologies; and

**WHEREAS**, this expansion of connectivity and reliability is a matter of economic development, education assistance (EC 3.1-3.5) which is critical to business expansion and educational assistance and which the Barron County Board of Supervisor supports; and

**WHEREAS**, the drafting of this resolution has the support of Barron County Economic Development Director Dave Armstrong; and

**WHEREAS**, due to the relatively short timeline for submitting this grant application this resolution was put forth by Chair Okey; and

**WHEREAS**, this Broad Band expansion is in the following Barron County Supervisory Districts: (2022-2032 Supervisory District Maps)

#4: Supervisor Terry Lee (North Chetek Fiber Expansion)

#8: Supervisor Gary Taxdahl (Township of Almena Fiber Expansion)

#27: Supervisor Bill Effertz (Township of Almena Fiber Expansion); and

**BARRON COUNTY RESOLUTION NO. 2022 - 10**

**Resolution Supporting Mosaic Technologies, Inc., Cameron, WI, State of Wisconsin,  
Broadband Expansion Grant**

**WHEREAS**, the November 9<sup>th</sup>, 2021 grant announcement for the Broad Band Expansion Grant is estimated to be \$100M in total for the State of Wisconsin with this grant application estimated at approximately \$3M.

**NOW, THEREFORE, BE IT RESOLVED**, that the Barron County Board of Supervisors does by passage of this resolution fully support Mosaic Technologies grant application for the State of Wisconsin Broadband Expansion Grant, supporting broadband infrastructure improvements in Barron County; and


**NOW, THEREFORE, BE IT FURTHER RESOLVED**, that this resolution be distributed to the appropriate Federal and State Officials as necessary; and

**BE IT FURTHER RESOLVED**, that publication of this resolution may occur through posting in accordance with Section 985.02 of the Wisconsin Statutes.

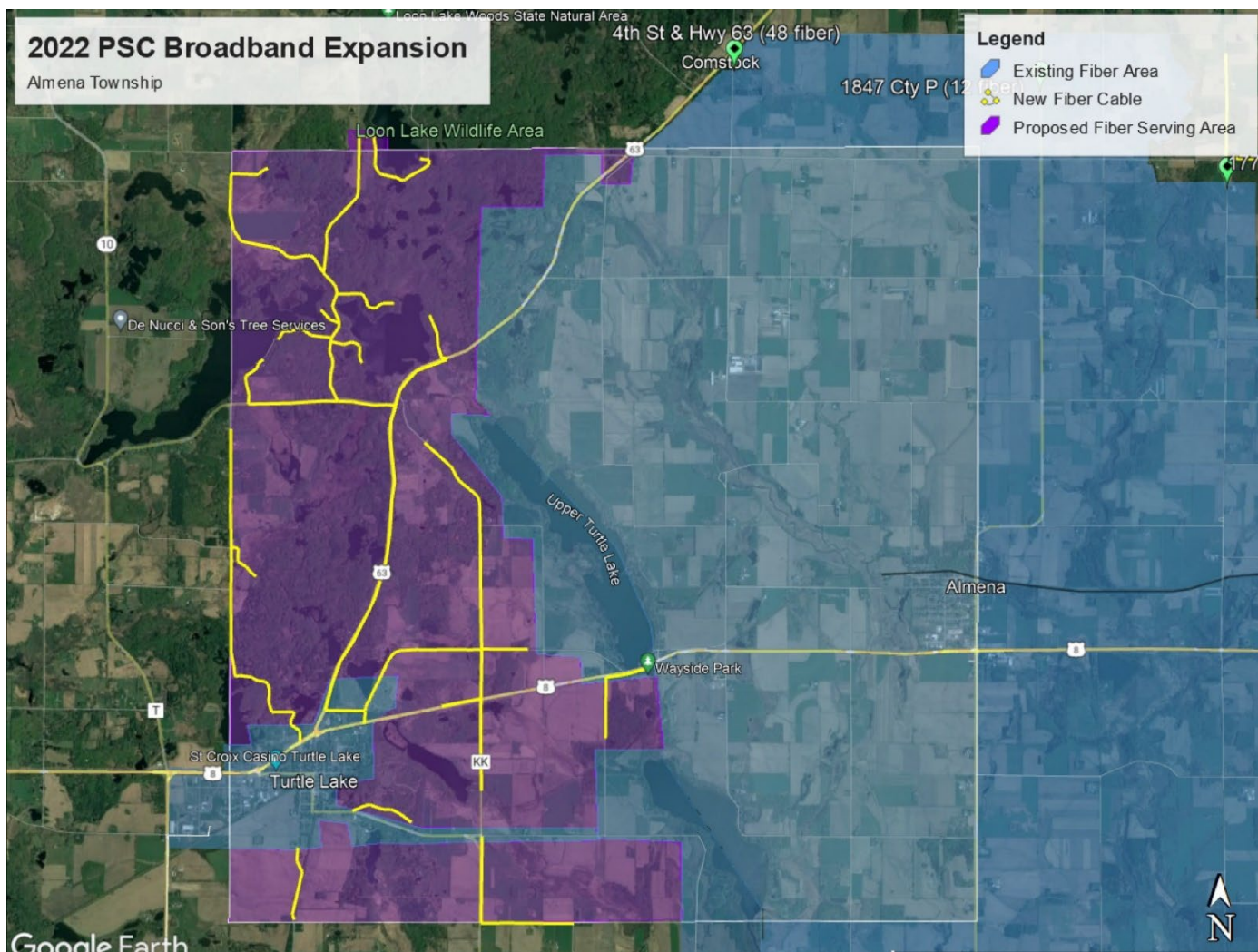
BARRON COUNTY RESOLUTION NO. 2022 - 10

Resolution Supporting Mosaic Technologies, Inc., Cameron, WI, State of Wisconsin,  
Broadband Expansion Grant

OFFERED THIS 21<sup>st</sup> day of February, 2022.

<p>Number of readings required: One (X) Two ( )</p> <p>Vote required for passage: Majority (X)</p> <p>2/3 Joint Board ( )</p> <p>Source of funding: Budgeted ( ) General Fund ( )</p> <p>Grant ( ) Contingency ( )</p> <p>Other (X) Detail: No County Funds</p> <p>Fiscal impact:</p> <ul style="list-style-type: none"> <li>- Current year total amount: \$ -0-</li> <li>- Future years total amount: \$ -0-</li> <li>- Effect on tax levy - current year: \$ -0-</li> <li>- Effect on tax levy - future years: \$ -0-</li> </ul> <p>Fiscal impact reviewed by County Finance Department</p> <p>Jodi Bink, Finance Director</p> <p>Board Action: Adopted ( ) Failed ( ) Tabled ( )</p> <p>Approved as to form by County Administrator:</p> <p>Jeffrey M. Muehl, Administrator</p> <p>Approved as to form by Corporation Counsel:</p> <p>Johanna Muehl, Corporation Counsel</p>	<p></p> <p>Chair Okey County Board Chair</p> <p>(The Committee Chair signature verifies the action taken by the Committee.)</p> <p>Board Action: Adopted (X) Failed ( ) Tabled ( )</p> <p>Chair Okey gave an overview of the grant. Motion: (Anderson/Heller) to approve. Carried.</p>
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**Exhibit B**  
**Map of Proposed Service Area**



### Exhibit C Construction Costs

#### FY22 Broadband Expansion Grant Application Budget & Income Summary



Please complete this form using Microsoft Excel. A PDF copy must be attached to your application as page four. In addition, this form must also be uploaded to ERF in Excel format.

#### Grant Summary

<b>Grant Applicant:</b>	<b>Project:</b>
CTC Telcom, Inc. dba Mosaic Technologies	Town of Almena

#### Budget

Line:	Description / Category:	Grant Funds:	Match:	Total:
1	Contractual, Consultant Fees	\$ 1,657,629.00	\$ 245,871.00	\$ 1,903,500.00
2	Equipment	\$ 164,750.00	\$ -	\$ 164,750.00
3	Supplies			\$ -
4	Labor (Salary, Fringe)	\$ 295,652.00	\$ -	\$ 295,652.00
5	Permitting, Licensing Fees			\$ -
6	Travel			\$ -
7	Other			\$ -
<b>Total:</b>		<b>\$ 2,118,031.00</b>	<b>\$ 245,871.00</b>	<b>\$ 2,363,902.00</b>
				10.4% match requested

#### Pledged Contributions

#:	Entity:	Entity Type:	Pledge Type:	Pledge:
1	Mosaic Technologies	Applicant	Cash	\$ 200,000.00
2	Town of Almena	Partner	Cash	\$ 44,871.00
3	Barron County Economic Development Corporation	Partner	Cash	\$ 1,000.00
4				
5				
6				
7				
8				
9				
10				
<b>Total:</b>				<b>\$ 245,871.00</b>

Construction =	\$ 1,648,300
Electronics =	\$ 164,750
Drop construction =	\$ 255,200
Pre-construction coordination and drops =	\$ 39,875
Splicing =	\$ 138,690
Engineering =	\$ 34,672
<u>Inspection, project management, records =</u>	<u>\$ 82,415</u>
<b>TOTAL =</b>	<b>\$ 2,363,902</b>
<b>Electronics Breakdown purchased by Mosaic</b>	
Clearfield Field Splitter Cabinets =	\$ 60,000
Calix E7 series XGS-PON electronic terminals =	\$ 25,000
<u>ONTs/CPE devices =</u>	<u>\$ 79,750</u>
	\$ 164,750



## Exhibit D

### History of Chibardun Telephone Cooperative/CTC Telcom DBA Mosaic Technologies

Chibardun Telephone Cooperative formed as a cooperative in 1957. Prior to that, individual communities within the current incumbent footprint had their own municipal telephone operation. With changing technology and need for investment, community leaders decided to join forces to form one larger cooperative. The name Chibardun came from the three counties where the founders were located: Chippewa, Barron, and Dunn Counties (CHI-BAR-DUN).

Chibardun has always been considered a leader and key business in Barron County. We are very active in the communities we serve by participating in local events, supporting schools, providing scholarships to students, and donating money and in-kind contributions to local civic groups.

Chibardun is a premier provider of high-speed internet, video, and voice services, but also offers professional managed IT solutions, commercial telephone systems, and wiring installation services to businesses in Northwest Wisconsin.

Chibardun has always been on the leading edge of business ventures and service offerings. Some notable accomplishments include:

The introduction of both paging services and cable television in the mid-1980s, and the introduction of broadband internet in the mid-1990s.

**Late 1990s:** Chibardun formed a competitive company, CTC Telcom, Inc., and invested into the nearby communities of Barron, Chetek, and Rice Lake.

**Early 2000s:** Fixed mobile wireless Internet service through a 700Mhz licensed spectrum investment was offered.

**2009:** To more accurately reflect the broad spectrum of services that were offered, Chibardun adopted the Doing Business As (DBA) name of Mosaic Telecom. Branded as Mosaic Mobile, the company operated its own cellular network/cell phone service. Recognizing the economic challenges of providing the latest technology in an ever-changing cellular industry, Mosaic exited all wireless operations in early 2016.

**2016:** Management made the pledge to fully fiber the incumbent territories still using copper facilities as well as develop a long-range plan of expanding our fiber footprint in Northwest Wisconsin. With financial support from the Rural Utilities Service (RUS), a division of the United States Department of Agriculture, Chibardun began expanding its fiber facilities in early 2017. To date, Chibardun's entire incumbent territory is 100% FTTH. In recognition of its efforts, Chibardun was recognized by the National Telecommunications Cooperative Association (NTCA) with the Smart Rural Community award for its advancement of technology in its serving area.

**2017- Present:** Beyond the pledge to fully fiber the incumbent territories, Mosaic has dedicated significant resources to logical expansion of its fiber footprint to include competitive areas where the incumbent carrier has failed to improve its infrastructure. Mosaic has completed nine grant aided projects, with five in progress, along with self-funding multiple other projects to improve the fiber infrastructure to our region.

**2020:** Mosaic Telecom rebranded to Mosaic Technologies to reflect the vision of the company and its product offerings more accurately. Mosaic continues to grow and look for opportunities to bring broadband to rural, underserved areas. Being a small company, we understand the need to act as good stewards of our resources to maximize the positive impact to our communities.

**2021:** In March of 2021 Mosaic was awarded three PSC broadband expansion grants; Towns of Cedar Lake, Sand Creek, and Prairie Farm. Mosaic constructed fiber to approximately 1,215 homes and businesses around Red Cedar Lake (Town of Cedar Lake) in northeast Barron County and the Village of Birchwood in southeast Washburn County. All fiber construction was completed by the first quarter of 2022 for the Red Cedar project and all customers now have access to fiber services. Final grant documents were submitted in the first quarter of 2022.

Additionally, Mosaic constructed fiber past 1,453 homes and businesses in the Towns of Sand Creek and Otter Creek and the Towns of Prairie Farm and New Haven in southern Barron County and northern Dunn County. This project was also completed in late 2021. Final inspections are taking place and closeout is expected to be completed by the second quarter of 2022.

These three projects provide robust and reliable best-in-class fiber services to these communities. The successful completion of these projects demonstrates Mosaic's capability in expanding their fiber network to the residents and businesses located in their surrounding communities.

Starting in 2017, Mosaic Technologies, embarked on a multiyear initiative to overbuild fiber in the areas of its six-exchange incumbent territory being served with copper. Since inception, the cooperative has plowed over 1,100 miles of fiber. As of today, the entire cooperative service areas is 100% FTTH. This project was funded, in part, through loans from the Rural Utilities Service (RUS), a division of the United States Department of Agriculture.

Over the past four years, Mosaic has self-funded multiple smaller projects outside its incumbent territory. In the Cities of Barron, Chetek, and Rice Lake, Mosaic enhanced its rich copper network by vectoring its VDSL platform, bringing speeds up to 150/25 Mbps to residents in those areas. While this copper strategy serves as a technology improvement, the long-term solution is fiber. Starting in 2021, Mosaic has invested in fiber where current copper facilities exist in its competitive footprint to future proof its network.

Additional Mosaic Technologies self-funded fiber projects include:

- Turtle Lake – As mentioned previously Mosaic submitted a 2020 grant request for Turtle Lake. While this grant was not funded, Mosaic remained committed to bringing fiber to these underserved residents and businesses. During the spring and summer of 2020, fiber construction passed over 300 homes in the Village.
- Rice Lake – Starting in 2021, Mosaic began a multi-year initiative to replace copper facilities with fiber services to approximately 3,723 residents and businesses. To date we have completed FTTP to 473 locations.
- Chetek – Also starting in 2021, Mosaic began a 2-year initiative to replace copper facilities and construct new greenfield. To date we have successfully completed the replacement of all copper with fiber to 1,200 locations and have constructed greenfield fiber service to 350 new locations. This project is schedule to be completed in May of 2022.

All of these projects represent Mosaic's ongoing commitment to bring best-in-class fiber services to rural Northwest Wisconsin.

**Exhibit E**  
**Letters in Support of this Application**



**DAVE ARMSTRONG**

STATE REPRESENTATIVE • 75<sup>TH</sup> ASSEMBLY DISTRICT

February 14, 2022

Chairperson Rebecca Valcq  
Public Service Commission of Wisconsin  
4822 Madison Yards Way  
Madison, WI 53705

Dear Chairperson Valcq,

I am pleased to support Mosaic Technologies' broadband expansion grant application to provide broadband service to underserved areas in Barron County, specifically the Town of Almena project between the Village of Turtle Lake and Upper and Lower Turtle lakes that will improve access for over 300 locations.

As Representative of the 75<sup>th</sup> Assembly District, I represent Barron County in the Wisconsin State Assembly, and I also serve as Barron County's economic development director, so I appreciate Mosaic's commitment to expand broadband service to an underserved portion of the county. Broadband is important for both residents and businesses, and Mosaic's proposal provides opportunities to these groups. As seen in the past two years, opportunities like these are crucial, especially in rural areas where traditional opportunities already require significant travel. Enhanced broadband will open up possibilities in an economically challenged area.

Once barriers to broadband expansion are removed, Barron County will improve its position as a destination for startups, expanding and relocating businesses, and telecommuters and working families relocating here. Barron County's proximity to both Minneapolis-St. Paul and Eau Claire provides huge potential markets that we are actively pursuing. New business begets skilled workers, increased home values, and increased tax base; new families expand and revitalize our workforce. The investment by Mosaic Technologies and the State of Wisconsin through broadband expansion grants will be of significant economic benefit to the residents and businesses of Barron County.

Please feel free to contact me with any questions at (608) 266-2519 at [Rep.Armstrong@legis.wi.gov](mailto:Rep.Armstrong@legis.wi.gov).

Thank you for your consideration.

Sincerely,

A handwritten signature in blue ink, appearing to read "Dave Armstrong".

Dave Armstrong  
State Representative  
75<sup>th</sup> Assembly District



**SENATOR JANET BEWLEY**  
**WISCONSIN STATE SENATE**

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February 18, 2022

Mr. Dennis Klaila  
Public Service Commission of Wisconsin  
Broadband Grant Review  
4822 Madison Yards Way  
Madison, WI 53707

Dear Mr. Klaila,

Today I write to voice my enthusiastic support for the PSC Broadband Expansion Grant application for the Town of Almena project. Submitted by Mosaic Technologies for 28 miles of mainline fiber in western Barron County, this plan is designed to deploy advanced capability in unserved and underserved areas of the State and is especially deserving of consideration for a grant.

Building on Mosaic Technologies' commitment to its customers, this plan would further expand fiber optic service to both unserved and underserved areas. This proposal can provide access to 319 locations between the Village of Turtle Lake and Upper and Lower Turtle Lakes, with room to grow. Especially in more rural Northwoods communities, broadband access is essential for the residents, businesses, and visitors to stay connected and operate efficiently in their daily lives.

This project application from Mosaic Technologies is an excellent opportunity to ensure this area will continue to support the area's population, business, and visitors.

I urge the Commission to take this opportunity to support the people and businesses of Barron County and give favorable consideration to the application for a PSC Broadband Expansion Grant. Thank you for your time and your consideration.

Sincerely,

A handwritten signature in black ink that reads "Janet Bewley".

Janet Bewley  
Senate Minority Leader  
25<sup>th</sup> Senate District



**25th Senate District**

State Capitol: P.O. Box 7882, Madison, WI 53707-7882 ★ E-mail: [sen.bewley@legis.wi.gov](mailto:sen.bewley@legis.wi.gov)  
Web: <http://bewley.senate.wi.gov> ★ (608) 266-3510 ★ Toll-free: (800) 469-6562



## WE BACK THE BEARS

*The mission of the Barron Area School District is to ensure all students reach their dreams while making a positive impact on the world.*

March 10, 2022

To Whom It May Concern:

The Barron Area School District would like to provide support to Mosaic Technologies for the broadband grant application in pursuit of bringing fiber to the homes in Barron County.

Families and in particular, teachers and students, would significantly benefit from this type of project in our area. We are a school district with a very robust 1:1 educational school-to-home technology program that has been in place for over ten years. Our educators have modified their curriculum and much of this includes technology-infused portions of instruction and curriculum. We find that it is a hardship for our families that live in this area to get adequate broadband service options. We estimate that 70% of our curriculum is online/digital format so adequate, reliable, home broadband opportunities are essential to our school-to-home partnership. This project would also help provide our students with equal opportunity for the instructional content that they are trying to access or complete at home. Many of our students are also enrolled in the BASD-ALAW charter school programming where 100% of their instruction is through online digital resources. Students of ALAW get their education in their home environments.

We believe that this grant, if awarded, would significantly benefit students, educators, and families of the Barron Area School District. Thank you for your consideration of Mosaic's grant application.

Sincerely,

A handwritten signature in black ink that reads "Kelly Hoyer". The signature is written in a cursive, flowing style.

Kelly Hoyer

Director of Technology

Barron Area School District





## SCHOOL DISTRICT OF TURTLE LAKE

205 Oak Street North  
Turtle Lake, WI 54889  
(715) 986-4470  
Fax (715) 986-2444

*"The Turtle Lake School Community instills excellence in staff and students producing graduates with the knowledge and tools necessary to excel in all aspects of life."*

Kent M. Kindschy, District Administrator    Troy Wagner, PK-5 Principal    Jason Hinze, MS/HS Principal

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3-16-22

To Whom It May Concern,

The School District of Turtle Lake would like to provide support to Mosaic Technologies for the broadband grant application in pursuit of bringing fiber to the home.

Families and in particular, teachers and students, would significantly benefit from this type of project in our area. We are a school district with a very robust one-to-one educational school-to-home technology program that has been in place for eight years. Our educators have modified their curriculum and much of these include technology-infused portions of instruction and curriculum. We find that it is a hardship for our families that live in the area to get adequate broadband service options we estimate 85 percent of our curriculum is online digital format so adequate reliable home broadband opportunities are essential to our district and home partnership this project would also help our students with equal opportunity for the instructional content that they are trying to access or complete at home. Some of our students are also enrolled in our Laker Online Virtual Charter School where 100% of their instruction is through online digital resources.

We believe that this grant evenly benefits students, educators, and families of the School District of Turtle Lake. Thank you for your consideration of Mosaic's grant application.

Sincerely,

A handwritten signature in black ink, appearing to read 'Kent M. Kindschy'.

Kent M. Kindschy

Superintendent

The School District of Turtle Lake does not discriminate on the basis of sex, race, color, age, national origin, ancestry, creed, religion, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional or learning disability.



March 16, 2022

Mr. Dennis Klaila  
Public Service Commission of Wisconsin  
4822 Madison, Yards Way  
North Tower – 6<sup>th</sup> Floor  
Madison, WI 53705-9100

Dear Mr. Klaila,

White Construction has a mutually successful partnership in place with Mosaic Technologies. In 2021 we partnered with them to build PSC grants in the Prairie Farm and Sand Creek exchanges, completing roughly 300 miles of mainline cable within a tight schedule. We will soon be under contract to build all five of their awarded 2021 PSC grants. We are poised to make significant progress on that work in the coming months. One key element that impacts the success of these projects is that White provides many of the materials. This alignment works well for both parties and helps to avoid the supply chain delays associated with many key materials.

Mosaic is applying for Broadband Expansion Grants in Washburn, Barron, Sawyer, and Dunn Counties. White Construction is committed to making this work a priority and will supply key materials to Mosaic if they are awarded these grants. White carries a large inventory of fiber optic cable and other critical materials. We will be able to allocate a portion of that inventory to Mosaic's grant projects, thereby adding to the likelihood of successful and timely completion of the work.

Mosaic is a key partner of ours. We have a proven track record of completing large projects together in a timely manner and are well positioned to build on that success. Expanding this partnership offers a great opportunity to improve communication services in unserved parts of Wisconsin.

We support and endorse Mosaic's application for this and future Broadband Expansion Grants.

Sincerely,

A handwritten signature in black ink, appearing to read 'Joel Schultz'.

Joel Schultz  
Project Manager, White Construction  
[joels@whiteconstruction.net](mailto:joels@whiteconstruction.net)  
920-543-5687

(920) 885-9932



200 Front Street



Suite 3A

PO Box 900



Beaver Dam, WI 53916